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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/302,409	04/30/1999	DENNIS J. O. SHAUGNESSY	1375A1	6842

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PPG INDUSTRIES INC  
INTELLECTUAL PROPERTY DEPT  
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PITTSBURGH, PA 15272

EXAMINER

MCNEIL, JENNIFER C

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 04/08/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

AS-13

**Office Action Summary**

Applicati n N .

09/302,409

Applicant(s)

SHAUGNESSY ET AL.

Examiner

Jennifer McNeil

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 February 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4-36 and 38-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-36 and 38-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4-36, and 38-50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 uses improper alternative language. The claim contains the term “consisting essentially of” in relation to an alternative phrase and is considered improper and indefinite. Please see MPEP 2173.05(h) for proper alternative language. Claim 4 also uses the phrase “selected from the group of” which is also improper alternative language.

Claim 5 contains the phrase “the electrical enhancing film” in line 2. There is insufficient antecedent basis for this phrase.

Claim 12 uses improper alternative language. The claim contains the term “consisting essentially of” in relation to an alternative phrase and is considered improper and indefinite. Please see MPEP 2173.05(h) for proper alternative language. This also applies to claims 15, 18, and 22.

Claims 12, 15, 18, 22, and 28 are indefinite. They contain the phrase “dielectric layer comprises a zinc oxide film; a zinc oxide, tin oxide film or a zinc stannate film...”. The alternative language grouping stops with the use of a semicolon. Should the semicolon be a comma?

Claim 15, line 7, should have --the-- before “third”.

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Also, claim 25, lines 10-11, claim 28, lines 15-23, and claim 31, line 19 each contain improper alternative language. Should “group of” be –group consisting of--?

Claim 31, lines 21-23 state, “the second dielectric film of the third dielectric layer have (should be *has*) a composition different than the composition of the second dielectric film of the third dielectric layer”. How is this possible? Lines 19-23 contain improper alternative language. Should “group of” be –group consisting of--?

Claim 48 contains the phrase “the second zinc stannate film”. There is insufficient antecedent basis for this phrase. The same is true for claim 50.

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 4, 7, 9, 25, 28, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Depauw et al (GB 2311540A). Depauw et al teach a coated sheet for use in a laminated assembly including a transparent substrate carrying two metal layers formed of silver and three layers of a transparent dielectric material. The dielectric material includes oxides such as tin oxide, zinc oxide, silicon nitride, or a mixture thereof, or a complex of zinc stannate. Each dielectric layer can include more than one of these materials and each layer can be a composite layer formed of successive subsidiary layers of different compositions. A combination of tin oxide and zinc oxide is generally advantageous, whether in an admixture of in successive sub-layers. The coated substrate also has a

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thin layer of a sacrificial metal, such as titanium, provided above and in contact with each metal (silver) layer. Table A shows the successive layers (films) which may be used in forming the dielectric layers of the laminate.

### **Response to Arguments**

The changes applicant made to overcome the 112(2) rejections of the previous office action were not sufficient. There are still numerous phrases which render the claims indefinite.

Regarding the rejection of claim 4, the claim does not require one of the layers to be zinc oxide, tin oxide. The first film may be zinc oxide, silicon oxide, tin oxide or silicon nitride, and the second film may be a zinc stannate film which is clearly taught by Depauw. The same is true for claims 25, 28, and 31, where there is no requirement for one of the claims to be a zinc oxide/ tin oxide.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer McNeil whose telephone number is 703-305-0553. The examiner can normally be reached on Monday through Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on 703-308-3822. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



JCM  
April 5, 2002

Jennifer McNeil  
Examiner  
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DEBORAH JONES  
SUPERVISORY PATENT EXAMINER